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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re Application

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SC/Serial No.: 09/773,312

Filed:                January 31, 2001

Title:                METHODS FOR CHARACTERIZING AND  
                      REDUCING ADVERSE EFFECTS OF  
                      TEXTURE OF SEMICONDUCTOR FILMS)

) PATENT APPLICATION  
)  
) Art Unit: 2812  
)  
) Examiner: Nguyen, Ha T  
)  
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)  
)  
) Customer No. 23910

**CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8**

I hereby certify that this correspondence is being deposited in the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, Art Unit 2812, Washington, D.C. 20231, on October 10, 2002.

*Jason D. Lohr* (Attorney Signature)  
Jason D. Lohr, Reg. No. 48,163  
Signature Date: October 10, 2002

**RESPONSE UNDER 37 C.F.R. § 1.111**

Commissioner for Patents  
Art Unit 2812  
Washington, D.C. 20231

Sir:

This RESPONSE is in reply to the Office action mailed April 10, 2002.

### Amendments

Please amend the above-identified application as follows:

#### In the Claims:

Please amend the current claims as indicated. All amended and unamended claims are included herewith for convenience. Marked up copies of the amended claims are included in an Appendix to this response. Claims 1, 3-10, 21, 22, and 25 have been amended. Claims 48, 49, and 50 have been added. Claims 2 and 24 have been withdrawn. Claims 1, 3-23, 25, 29, and 30 remain pending in the application.

B<sup>1</sup> 1. (Amended) A method for reducing diffusion of dopant ions from a doped dielectric layer into a metal layer, comprising:

- (a) depositing on said metal layer, a diffusion barrier, said diffusion barrier being comprised of a layer of metal nitride; and then
- (b) depositing a layer of doped dielectric material on said diffusion barrier.

2. (Withdrawn)

B<sup>2</sup> 3. (Amended) A method for reducing diffusion of dopant ions from a doped dielectric layer into a metal layer, comprising:

- (a) depositing on said metal layer, a diffusion barrier, said diffusion barrier being comprised of a layer of metal oxynitride; and then
- (b) depositing a layer of doped dielectric material on said diffusion barrier.

4. (Amended) The method of claim 1, wherein said diffusion barrier has a thickness in the range of about 10 Å to about 1000 Å.